

Remarks

Claims 1, 3-6, 9-16, 18-19, 21 and 22-26 remain in the application. Claims 2, 7-8, and 17 were previously canceled without prejudice. Claims 1, 9, 15, 16, and 21 are hereby amended. Claims 22-26 are newly added. No new matter is being added.

Claim Rejections -- 35 U.S.C. 103

Claims 1, 3-6, 9-16, 18-19 and 21 were rejected under 35 U.S.C. 103 as being unpatentable over Mittal in view of Norrell and Chang. This rejection is respectfully traversed.

Applicant has hereby amended claim 1 put it back in the form as originally filed. Claim 1 recites as follows.

- I. A method of assigning service priorities to traffic from a plurality of sources using meters, the method comprising:
 - receiving a packet that is placed into a specific class of service (COS) group;
 - determining a **fabric-adjusted** meter modifier **depending on technology** of a limiting uplink being used; and
 - adding the fabric-adjusted meter modifier to a meter corresponding to the specific COS group.

(Emphasis added.)

As seen above, claim 1 requires “determining a **fabric-adjusted** meter modifier **depending on technology** of a limiting uplink being used.” In other words, the meter modifier is unconventional in that it **depends on the technology or fabric of the limiting uplink being used**.

This claimed feature is discussed, for example, on page 5, lines 4-14 of the present application, which is reproduced below for convenience of reference.

Unlike in FIG. 2, a following step involves computation 302 of a fabric-adjusted meter modifier. **The fabric-adjusted meter modifier is generated by a user specified function that may be tailored to the specific technology or fabric of an uplink being used.** In addition, the fabric-adjusted meter modifier may also depend on the payload size of the packet. **For example, the specific link fabric used may comprise tagged or untagged hardware-based routing to an Ethernet link. In another example, the specific link technology used may comprise hardware-based routing to a Synchronous Optical NETWORK (SONET) link. In another example, the specific link technology may comprise a form of software-based routing.** Other specific link technologies may be used in other examples.

(Emphasis added.)

As seen above, the meter modifier is explained to be generated by a user specified function that depends on “the specific technology or fabric of an uplink being used.” Some examples of specific link fabrics are given, including “tagged or untagged hardware-based routing to an Ethernet link”, “hardware-based routing to a Synchronous Optical NETWORK (SONET) link”, and “software-based routing.”

An example showing improvement in resource utilization using fabric-adjusted meter modifiers is given in FIG. 6 of the present application, which is reproduced below for convenience of reference.

	conventional	fabric-adjusted	conventional	fabric-adjusted	conventional	fabric-adjusted
L2 Fabric	Untagged Ethernet	Untagged Ethernet	Tagged Ethernet	Tagged Ethernet	Software Router	Software Router
Header Size	12	12	16	16	12	12
Min Payload Per Frame	52	52	52	52	52	52
Max Payload Per Frame	1544	1544	1548	1548	1544	1544
COS Meter Function	p	p + 12	p	p + 16	p	constant
Payload size (p)	Link Utilization %	Link Utilization %	Link Utilization %	Link Utilization %	CPU Utilization %	CPU Utilization %
64	100%	100%	100%	100%	100%	100%
512	75%	100%	71%	100%	13%	100%
1024	73%	100%	69%	100%	6%	100%

FIG. 6

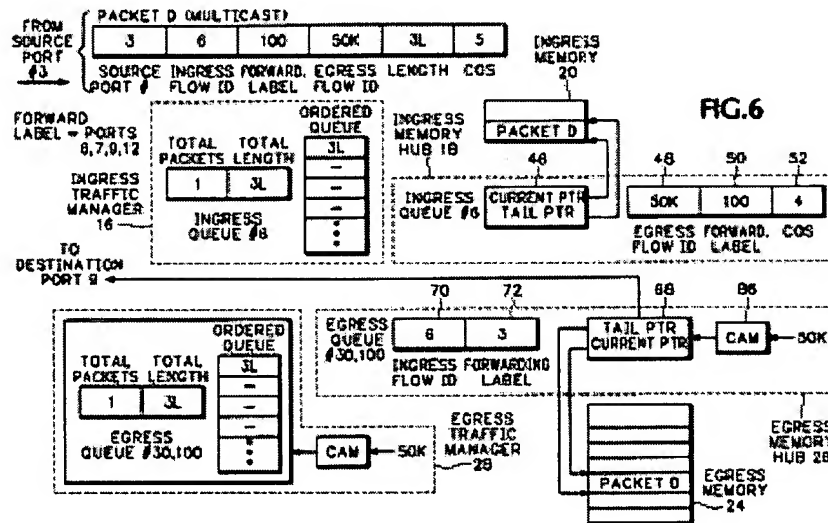
Page 8, lines 5-21 explains as follows.

As shown, the meter adjustment function is equal to the payload size (p) in the conventional cases (no adjustment), while the meter adjustment function using user configurable meter adjustment functions is variable depending on the particular fabric for the fabric-adjusted cases. The fabric-adjusted meter adjustment functions may be, for example, the payload size in bytes plus 12 for untagged Ethernet fabric, the payload size in bytes plus 16 for tagged Ethernet fabric, and a constant number (for example, one) for the software router.

The table also shows the improvement in link utilization attainable in accordance with embodiments of the invention. For untagged and tagged Ethernet, the link utilizations percentages are shown for various payload sizes. In the conventional cases, the link utilization is 100% for payloads of 64 bytes, but the link utilization drops for higher payload sizes. In contrast, the link utilization remains constant at 100% in the fabric-adjusted cases. Similarly, for software routing, the CPU utilization is 100% for payloads of 64 bytes, but the CPU utilization drops for higher payload sizes. In contrast, the CPU utilization remains constant at 100% in the fabric-adjusted cases.

Regarding the cited art, Mittal is cited in relation to the above-discussed claim limitation. More specifically, the office action cites to the Ingress Traffic Manager 16 and the Ingress Memory Hub 18 of FIG. 6 and column 9, lines 1-10 in Mittal. Applicant respectfully submits that the citation to Mittal does not disclose or teach the above-discussed claim limitation.

For convenience of reference, FIG. 6 of Mittal is reproduced below.



The cited portion (column 9, lines 1-10) of Mittal states as follows.

... The egress flow Id field 48 is set to 50K, the forwarding label field 50 is set to 100, and the CoS field 52 is initially set to 5. The ingress traffic manager 16 updates the corresponding ingress queue #6 to reflect a total number of packets as 1 and a total length of 3L. The ordered queue shows one packet of length 3L. The ingress traffic manager 16 schedules the multicast packet D in ingress memory 20 for outputting to the switch fabric. In this example, the ingress traffic manager 16 modifies the original CoS value of 5 to a CoS value of 4 before sending the packet to the switch fabric.

Applicant respectfully submits that nowhere in the cited portion of Mittal (nor elsewhere in Mittal) is a **fabric-adjusted** meter modifier taught or disclosed. In other words, there is no teaching of a meter modifier **which depends upon technology of an uplink** being used.

In addition, on page 9 of the office action, column 3, lines 35-45 of Mittal are cited against a similar limitation in original claim 20. Applicant respectfully submits that column 3, lines 35-45 of Mittal also do not teach or disclose a meter modifier **which depends upon technology of an uplink** being used.

Similarly, the other cited references of Norrell and Chang also do not teach a fabric-adjusted meter modifier which depends upon technology of an uplink being used.

Therefore, applicant respectfully submits that claim 1 is now patentably distinguished over the cited art.

Claims 3-6 and new claims 22-26 depend from claim 1. Hence, applicant respectfully submits that these claims are also now patentably distinguished over the cited art.

Similar to claim 1, claim 9 recites "calculation circuitry configured to determine a **fabric-adjusted** meter modifier **depending on a technology of an uplink being used**". (Emphasis added.) Therefore, applicant respectfully submits that claim 9 is now patentably distinguished over the cited art for similar reasons as discussed above in relation to claim 1.

Claims 10-14 depend from claim 9. Hence, applicant respectfully submits that these claims are also now patentably distinguished over the cited art.

Also similar to claim 1, claim 15 recites "means for adding the **fabric-adjusted** meter modifier to a COS meter corresponding to the specific COS group. Therefore, applicant respectfully submits that claim 15 is now patentably distinguished over the cited art for similar reasons as discussed above in relation to claim 1.

Again similar to claim 1, claim 16 recites "wherein the meter function is used to **adjust for a fabric uplink technology**." (Emphasis added.) Therefore,

applicant respectfully submits that claim 16 is now patentably distinguished over the cited art for similar reasons as discussed above in relation to claim 1.

Claims 18-19 depend from claim 16. Hence, applicant respectfully submits that these claims are also now patentably distinguished over the cited art.

Finally, similar to claim 1, claim 21 recites “wherein the meter modifier functions are **dependent upon which type of fabric-uplink technology is used.**” (Emphasis added.) Therefore, applicant respectfully submits that claim 21 is now patentably distinguished over the cited art for similar reasons as discussed above in relation to claim 1.

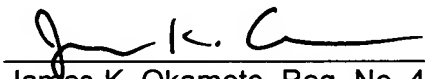
Conclusion


For the above-discussed reasons, applicant believes that the pending claims are now shown to be patentably distinguished over the cited art. Favorable action is respectfully requested.

If for any reason an insufficient fee has been paid, the Commissioner is hereby authorized to charge the insufficiency to Deposit Account No. 08-2025.

Respectfully Submitted,

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